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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/195,080	11/18/1998	KEIKO ABE	FUJA-15.646	3931

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EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2666

25

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/195,080

Applicant(s)

ABE ET AL.

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2004, has been entered.

Response to Arguments

Applicant's arguments filed April 22, 2004, have been fully considered but they are not persuasive.

1. Applicant argued that Nagami does not disclose a shortcut controller and memory as adjuncts to the switch. However, the shortcut controller (Figure 4, item 203-206) and memory (Figure 7, item S2, T1 and S6) act as adjuncts to the switch (Figure 4, item 202) to facilitate cut-through switching of network layer data packets (abstract, last seven lines). Once a bypass path is established, the routing elements are not accessed again (para. 119).

2. Applicant argued that Nagami does not dynamically cache information identifying outgoing route data transmitted from the routing device. However, if a layer-2 output path is unknown, it is determined by a layer-3 routing search which updates a layer-2 table (Figure 7, step S11; paras. 170-171 and 174). The bypass path does not require messaging to be determined (paras. 367, 370 and 375) and may be setup from a destination node to a second node (Figure 54; note: bidirectional communication for bypass pipes -- para. 423, lines 1-3).

3. Applicant argued that Nagami does not disclose a switch that has a fixed connection to a router, does not cache data received from a second node and transmitted to the switch from the

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router, and does not subsequently use the cache data to for a shortcut for transmitting a cell to the second node without routing the cell signal to the router. However, the connection between the switch and the routing device is fixed (Figures 4-5, 7; Figure 6, standard bus I/F; para. 150-155). As noted in the paragraphs above, data is cached to form a shortcut path (para. 367, 370 and 375; Figure 7, steps S8-S12) where the cached data is used to implement the shortcut path without accessing the router elements (para. 119; Figure 7).

Claim Objections

4. Claims 1-4 and 9-14 are objected to because in independent claims 1 and 9, "routed to the second node by the routing device, and returned therefrom through the predetermined connection path" should be --returned therefrom through the predetermined connection path, and routed to the second node by the routing device--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagami et al. (US 2001/0056490).

5. Regarding claims 1-2, 5-6, 9 and 12, Nagami discloses a packet transfer apparatus (Figures 1 and 55; abstract) for transferring cells (or frames) among first and second nodes (Figure 55, items 11) and a routing device (items 11, ROUTER; para. 9, lines 1-3). The connection between the switch and the routing device is fixed (Figures 4-5, 7; Figure 6, standard bus I/F; para. 150-155). Each node and router has an inherent interface and the routing device

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determines an outgoing route for the cells according to destination data contained in the cells (Figure 7; Figure 12, step S162). Each ATM cell is made from or encapsulated in an IP packet (Figure 7, steps S3) having destination data. The packet transfer apparatus comprises a switch (Figures 54-55, items 11; note: crossbar switch below router), a memory for caching outgoing routing data (Figure 7, items t3 and t2; step S9-S11), and a shortcut controller (Figure 4, item 203-206; Figure 7, item S2, T1 and S6; paras. 169 and 171) for forming a shortcut to transmit the cell directly from the first node to the second node (Figure 12, step S165; Figures 13, 54 and 55) without routing by the routing device (para. 119) when the outgoing route data contained in an input cell is equal to outgoing route data cached in the memory (Figure 7, steps S2 and S6), and otherwise, caching outgoing route data for the input cell into the memory (step S11; paras. 174, 185 and 187, lines 1-3) after the input cell has been transmitted to the routing device and back (Figure 7, steps S3-S4, S8, S11 and S12), and after the input cell has been routed to the second node by the routing device (Figure 7, steps S8-S13).

6. Regarding claims 3 and 7, the ATM cell is AAL5 (para. 418, last sentence; para. 430).
7. Regarding claims 10 and 13, the nodes transmit data according to frame relay (para. 38).
8. Regarding claims 4, 8, 11 and 14, the output route data includes a destination address and an outgoing port number (Figure 7, items t1 and t4).

Conclusion

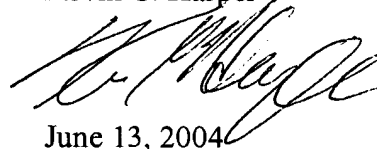
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays from 11:30 AM to 8:00 PM ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 703-308-5463. The centralized fax number for the Patent Office is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see pair.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin C. Harper

A handwritten signature in black ink, appearing to read 'K. Harper', written over the printed name and date.

June 13, 2004